



```
100
<schema xmlns="http://www.w3.org/2001/XMLSchema"
  xmlns:p="http://www.foo.com/personnel">
  102
  104
  106
  <annotation>
    <documentation xml:lang="en">
      Personnel Directory Records for foo.com
      Copyright 2002 foo.com. All rights reserved.
    </documentation>
  </annotation>
  108
  110
  <element name='personnel'>
    <complexType>
      <sequence>
        <element name='employee' minOccurs='1' maxOccurs='unbounded'>
          <complexType>
            <sequence>
              <element name='lastname' type='string' maxOccurs='1' />
              <element name='firstname' type='string' maxOccurs='1' />
              <element ref='notes' minOccurs='0' />
            </sequence>
            <attribute name='serno' type='integer' />
            <attribute name='userid' type='p:USERID_TYPE' />
            <attribute name='department' type='string' />
          </complexType>
        </element>
      </sequence>
    </complexType>
  </element>
  112
  114
  116
  118
  120
  122
  <unique name='dummy1'>
    <selector xpath='personnel/employee' />
    <field xpath='@serno' />
  </unique>
  <complexType>
    <attribute name='serno' type='integer' />
    <attribute name='userid' type='p:USERID_TYPE' />
    <attribute name='department' type='string' />
  </complexType>
  <sequence>
    <element name='notes' type="string" />
  </sequence>
  124
  126
  <element name="notes" type="string" />
  <!-- Customized Simple data type declaration -->
  <simpleType name='USERID_TYPE'>
    <restriction base='string'>
      <pattern value="[a-zA-Z][1][1-9a-zA-Z]*" />
    </restriction>
  </simpleType>
</schema>
128
130
```

FIGURE 1

```
<personnel>:= PS <employee> PE
<employee>:= <employee>
<employee>:= <employees> <employee>
<employee>:= ES <lastname> <firstname> <notes_01> EE
<lastname> := LS LE
<firstname> := FS FE
<notes>      := NS NE
<notes_01> := epsilon | <notes>
```

FIGURE 2

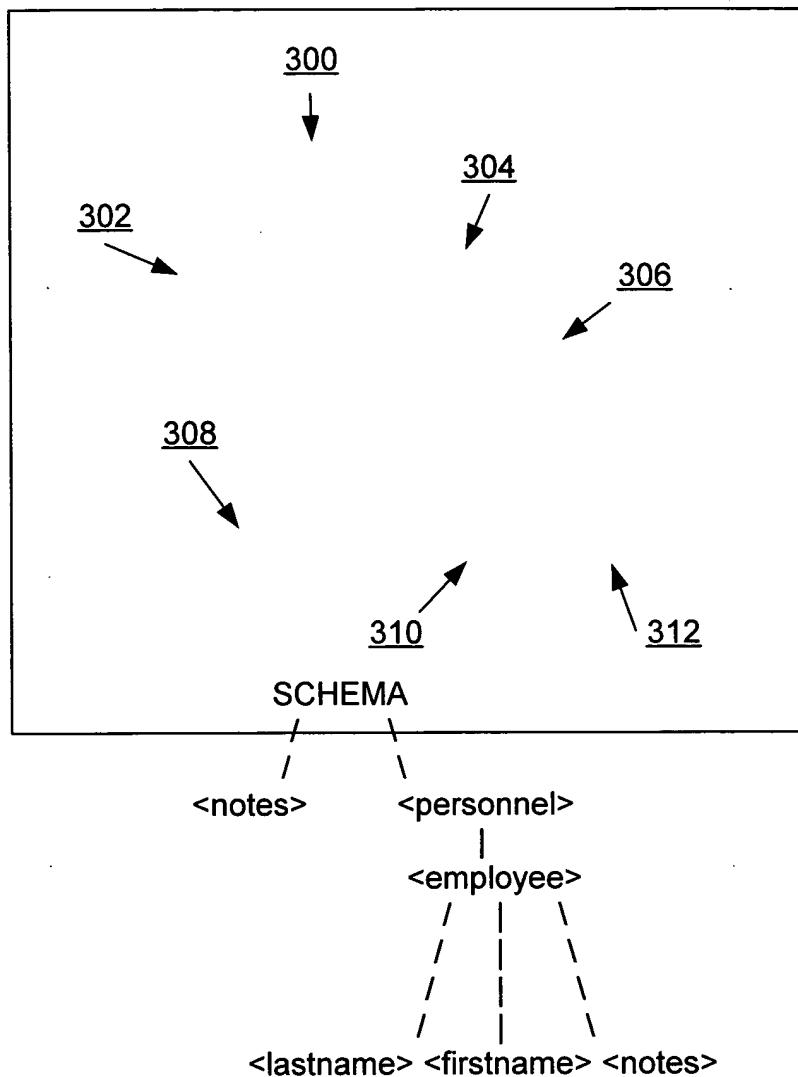


FIGURE 3

TYPE	ELEMENT NAME	SCHEMA CONTEXT PATH
<personnel>	personnel	<u>408</u> global
<employee>	employee	<u>410</u> p:personnel
<lastname>	lastname	<u>412</u> p:personnel/employee
<firstname>	firstname	<u>414</u> p:personnel/employee
<notes>	notes	<u>416</u> global or p:personnel/employee <u>418</u>

FIGURE 4

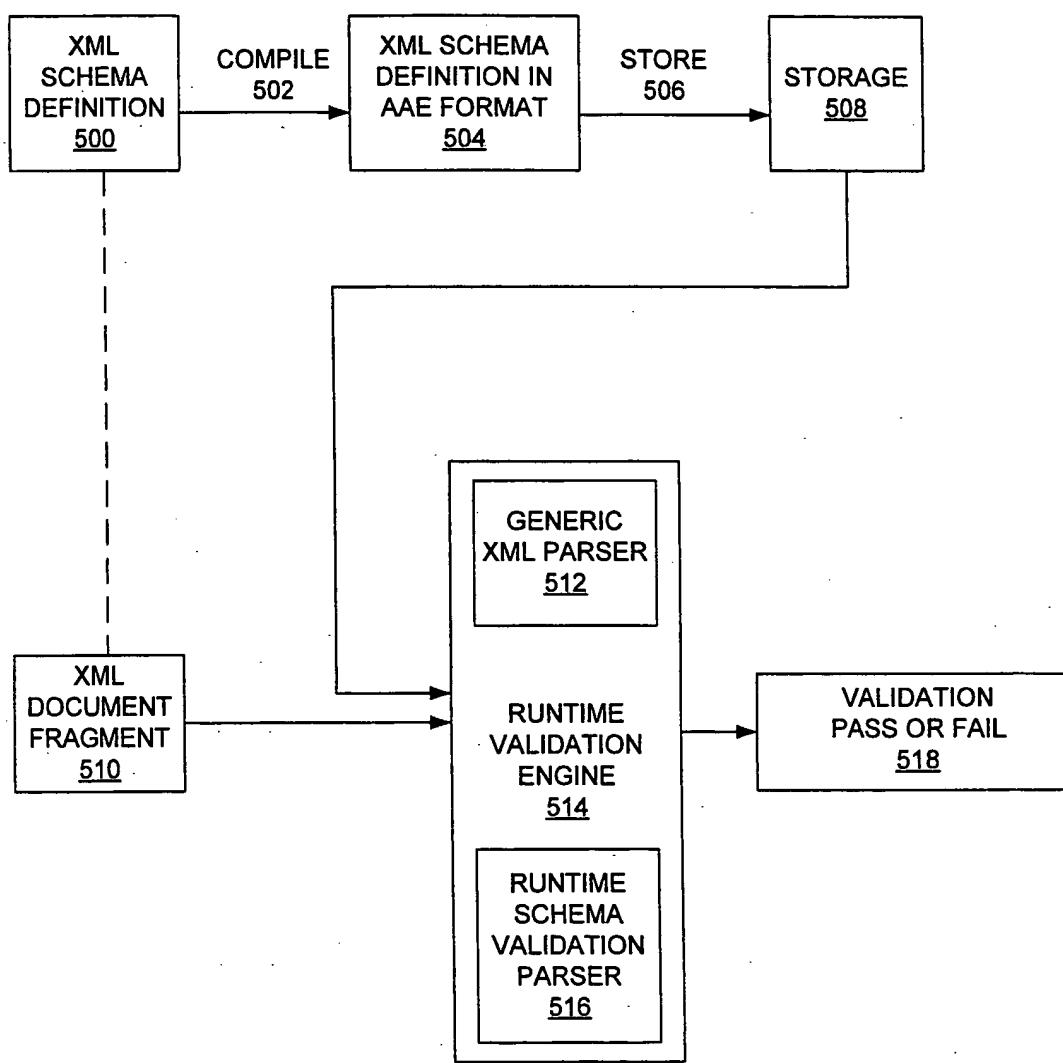


FIGURE 5

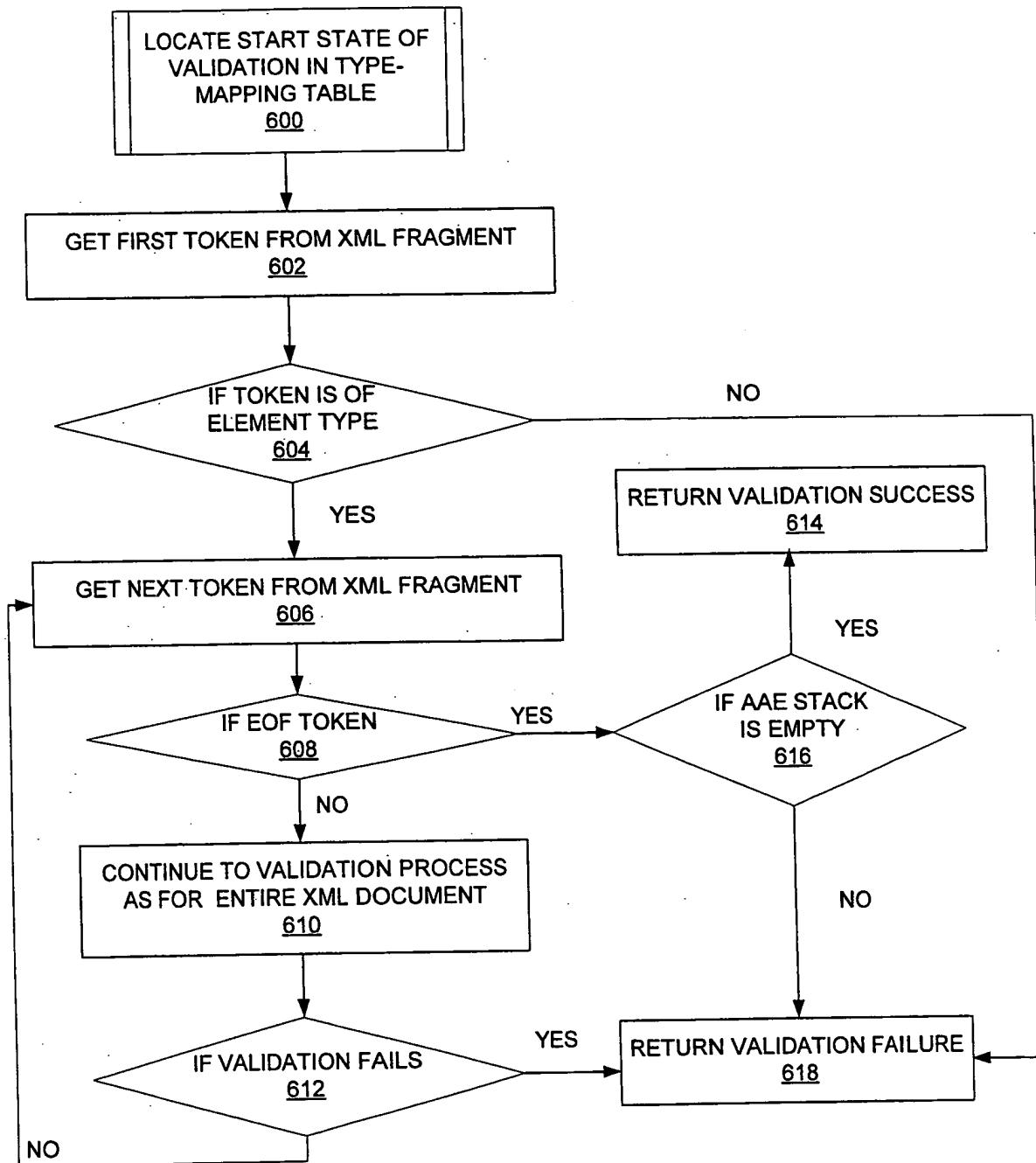


FIGURE 6

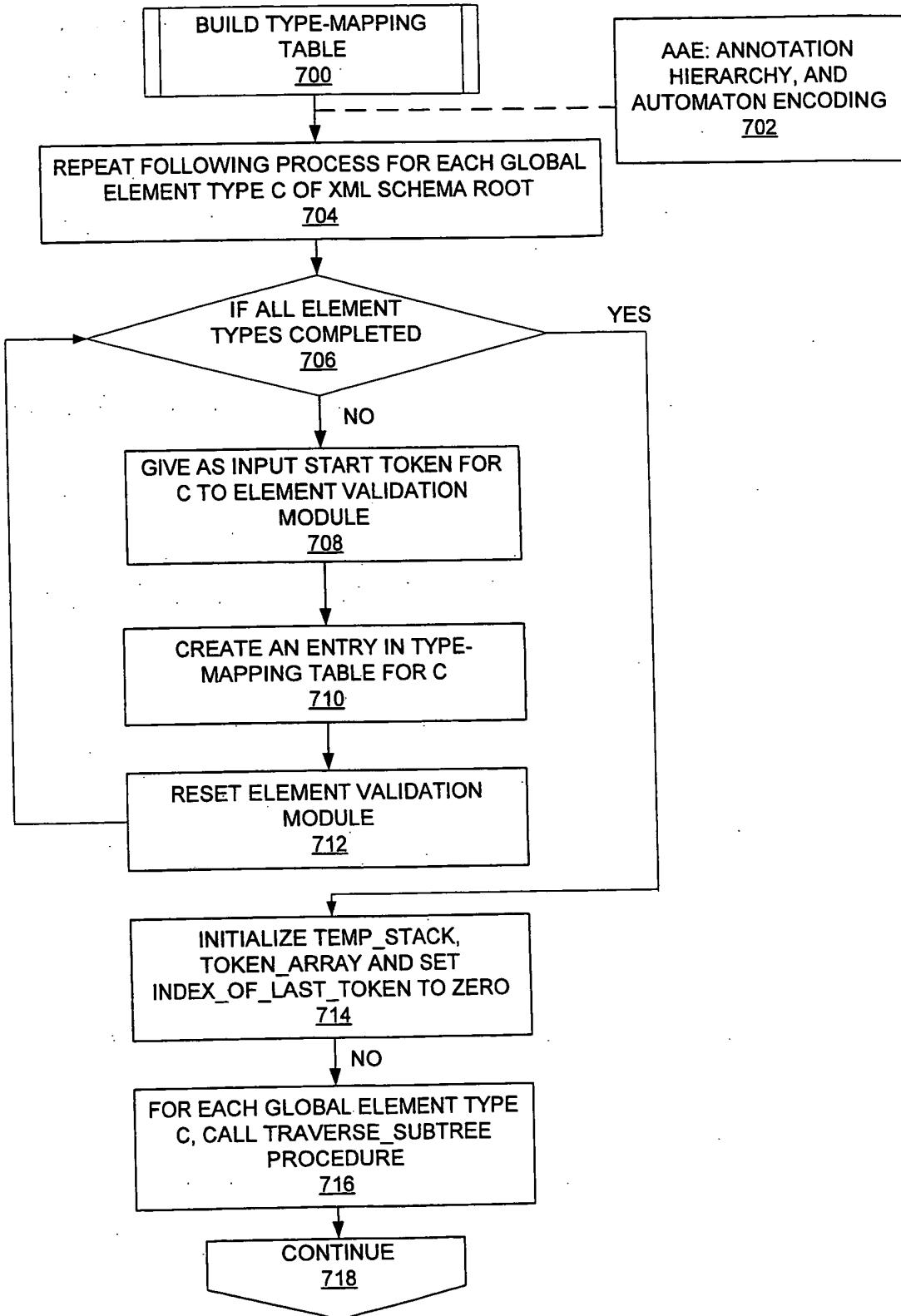


FIGURE 7A

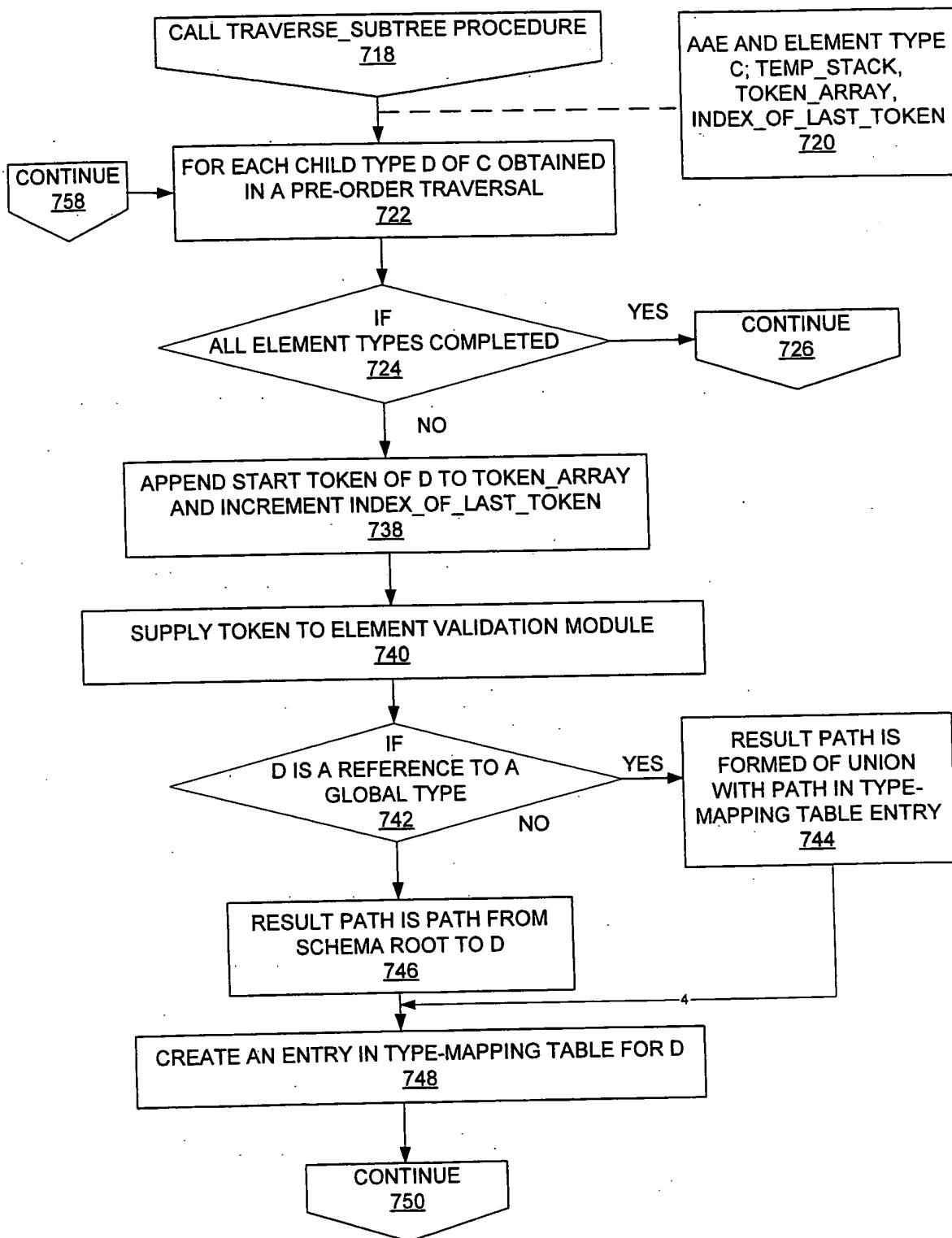


FIGURE 7B

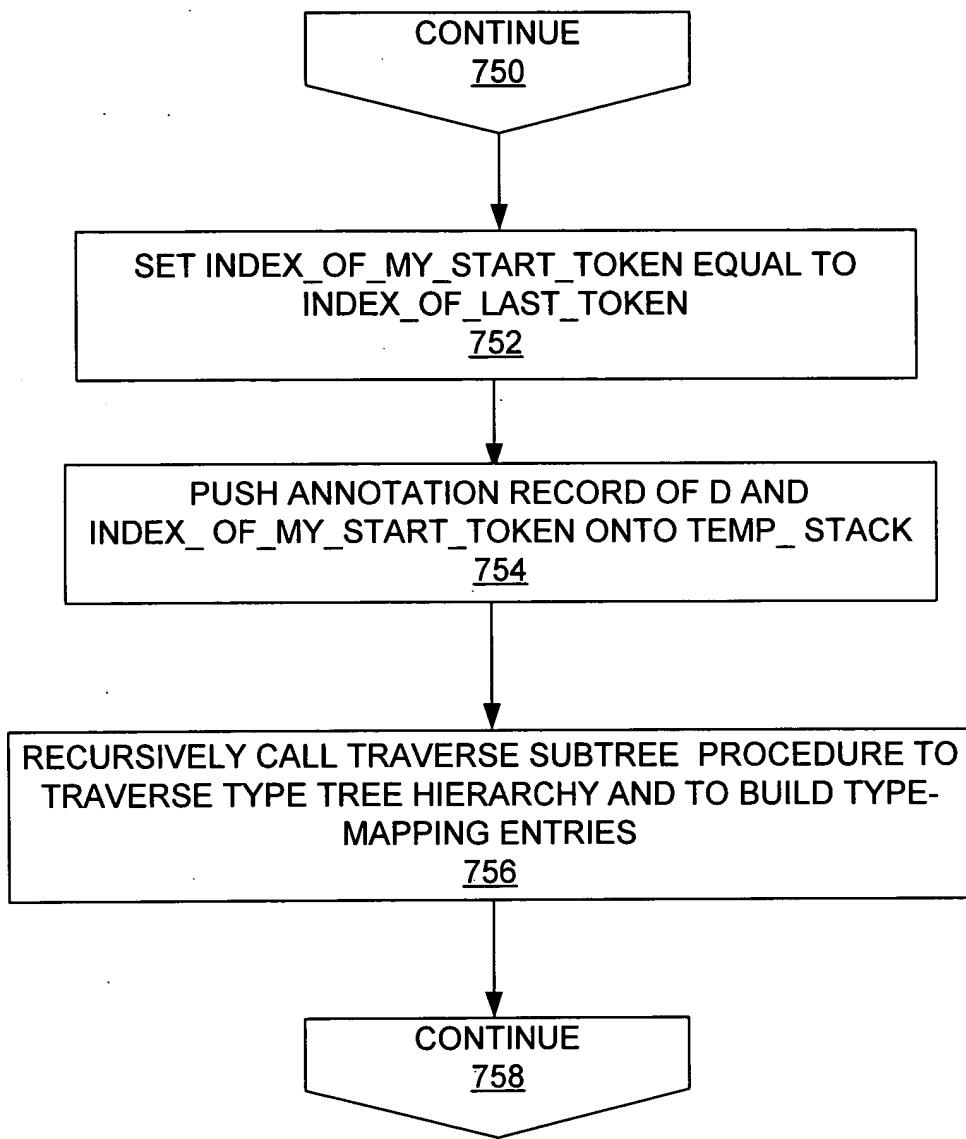


FIGURE 7C

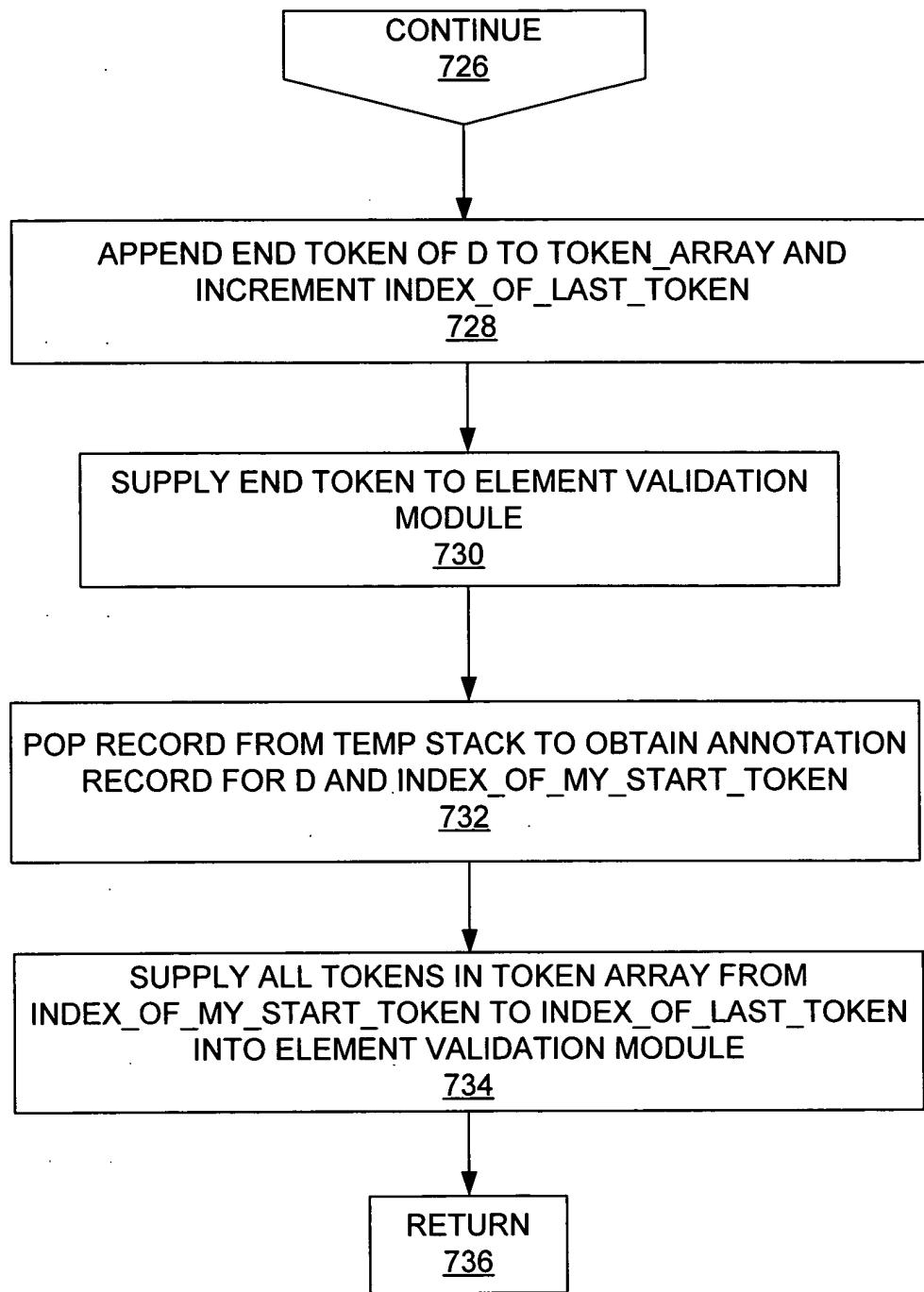


FIGURE 7D

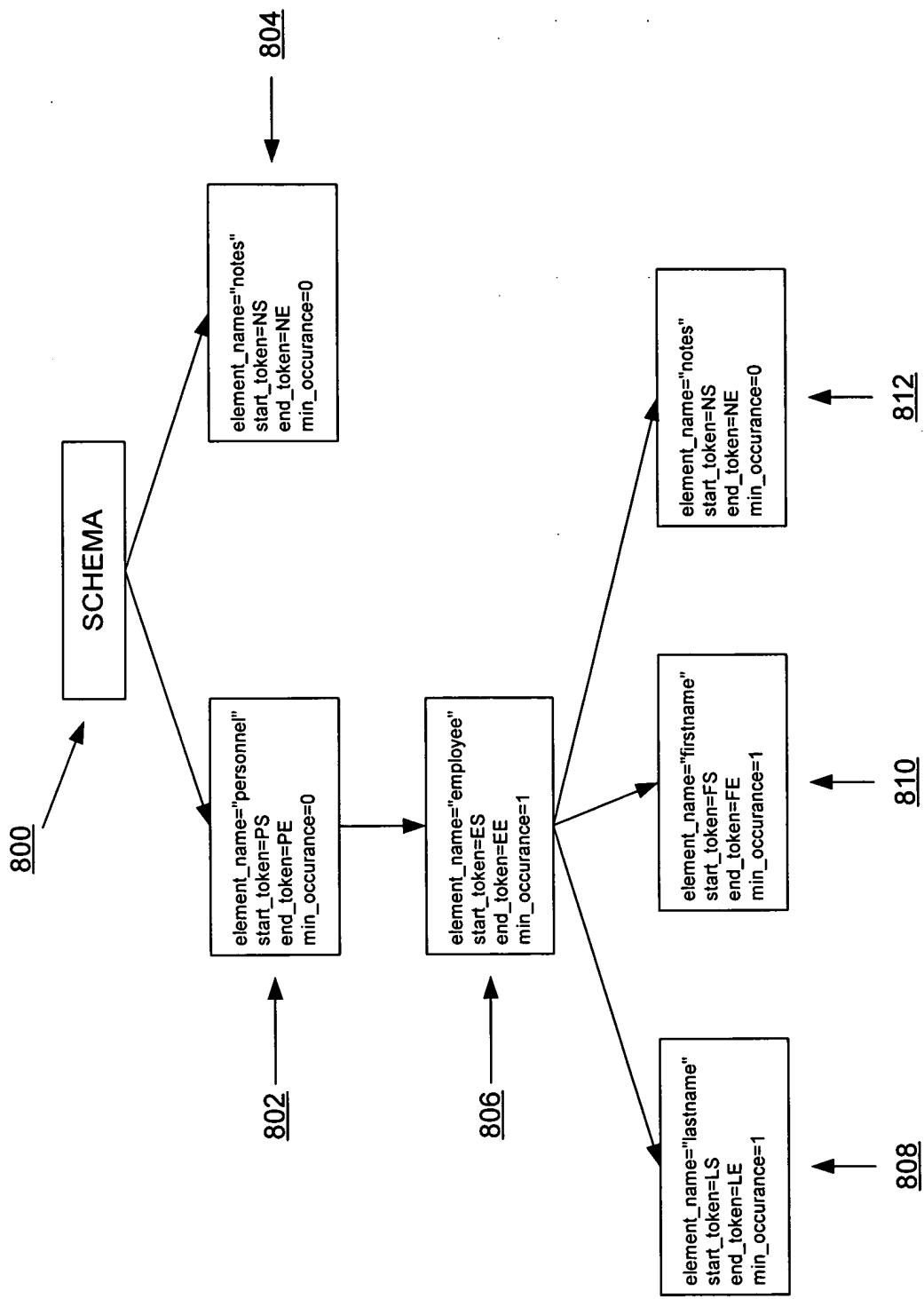


FIGURE 8

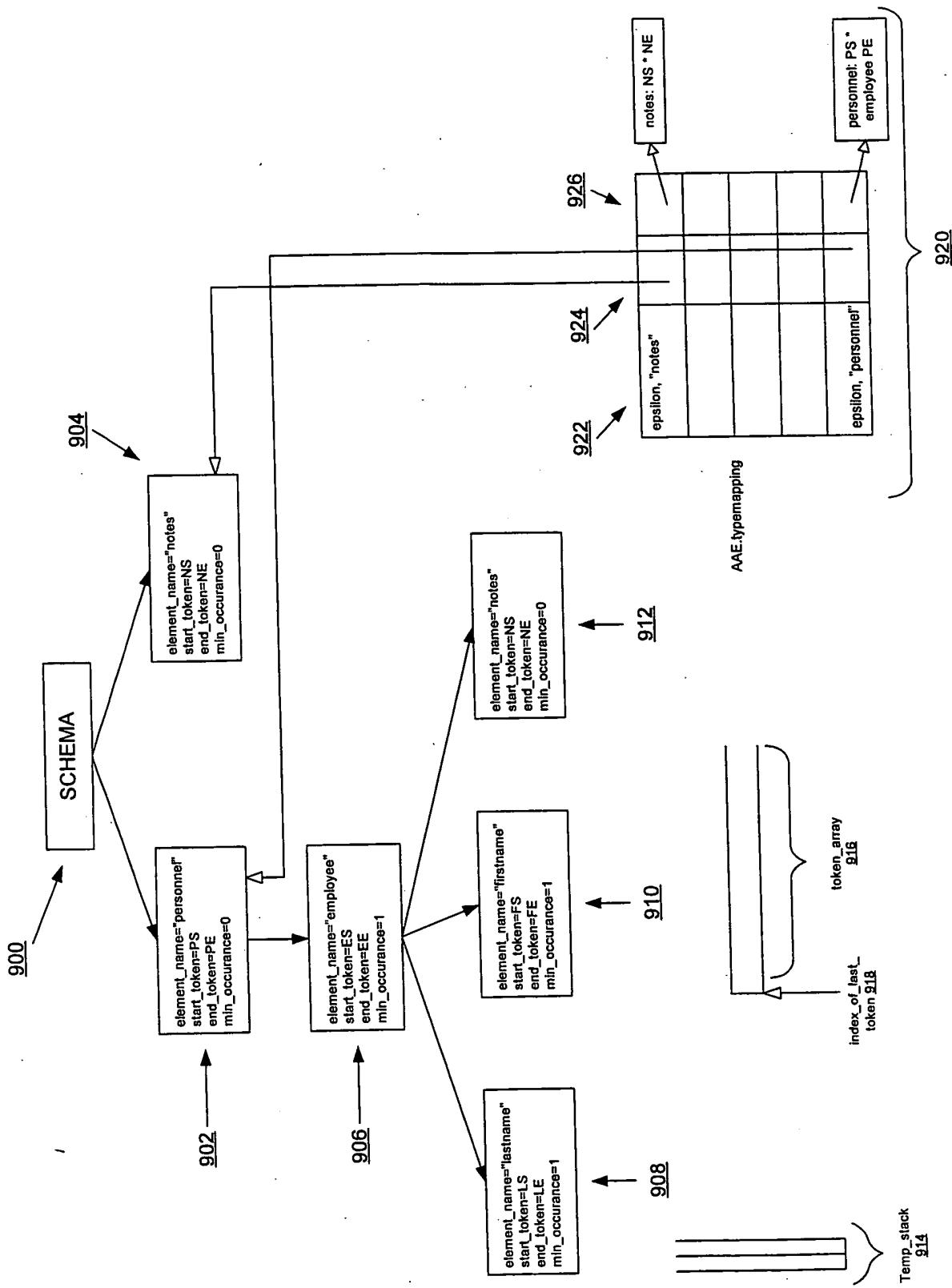


FIGURE 9

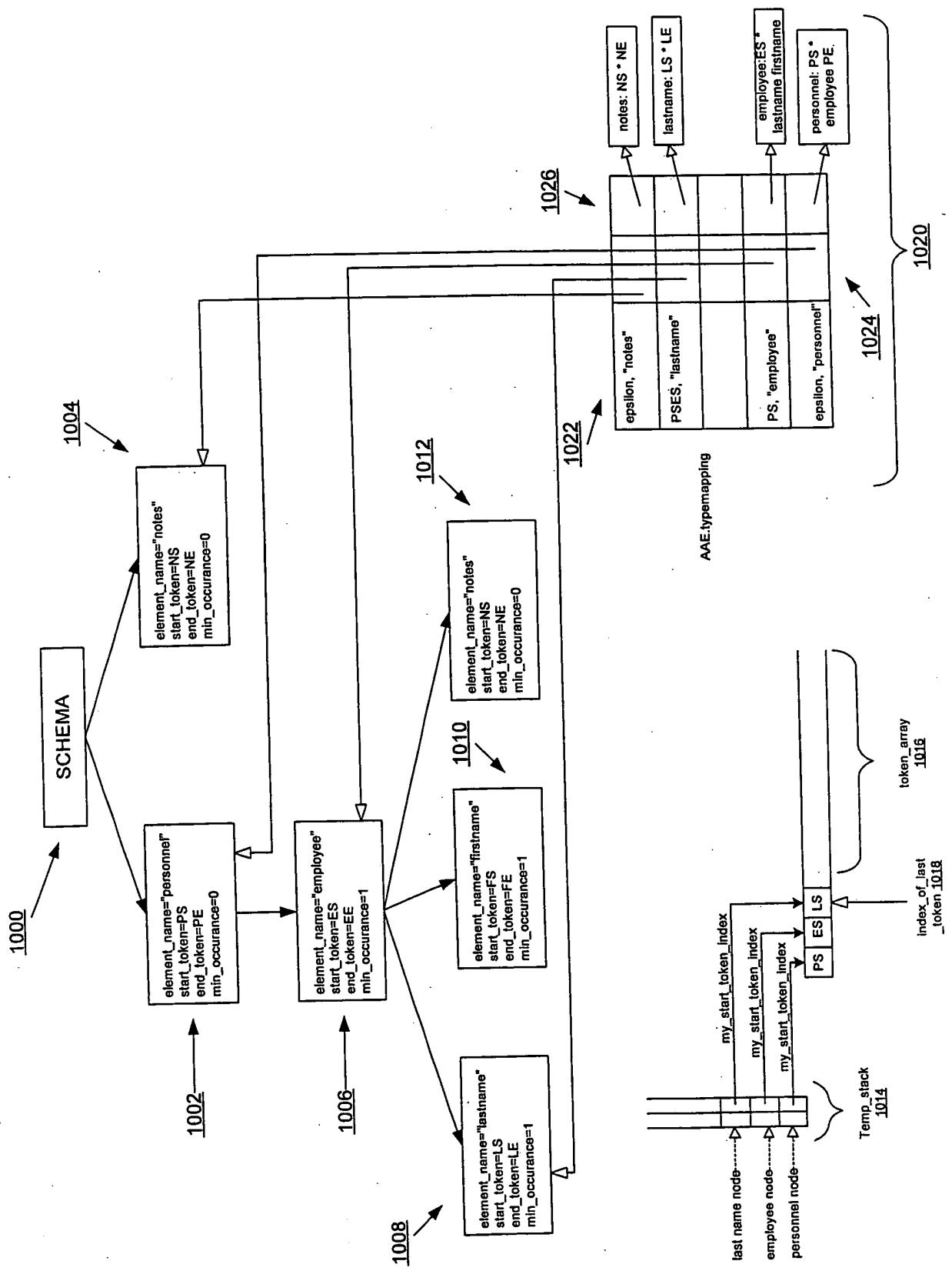


FIGURE 10

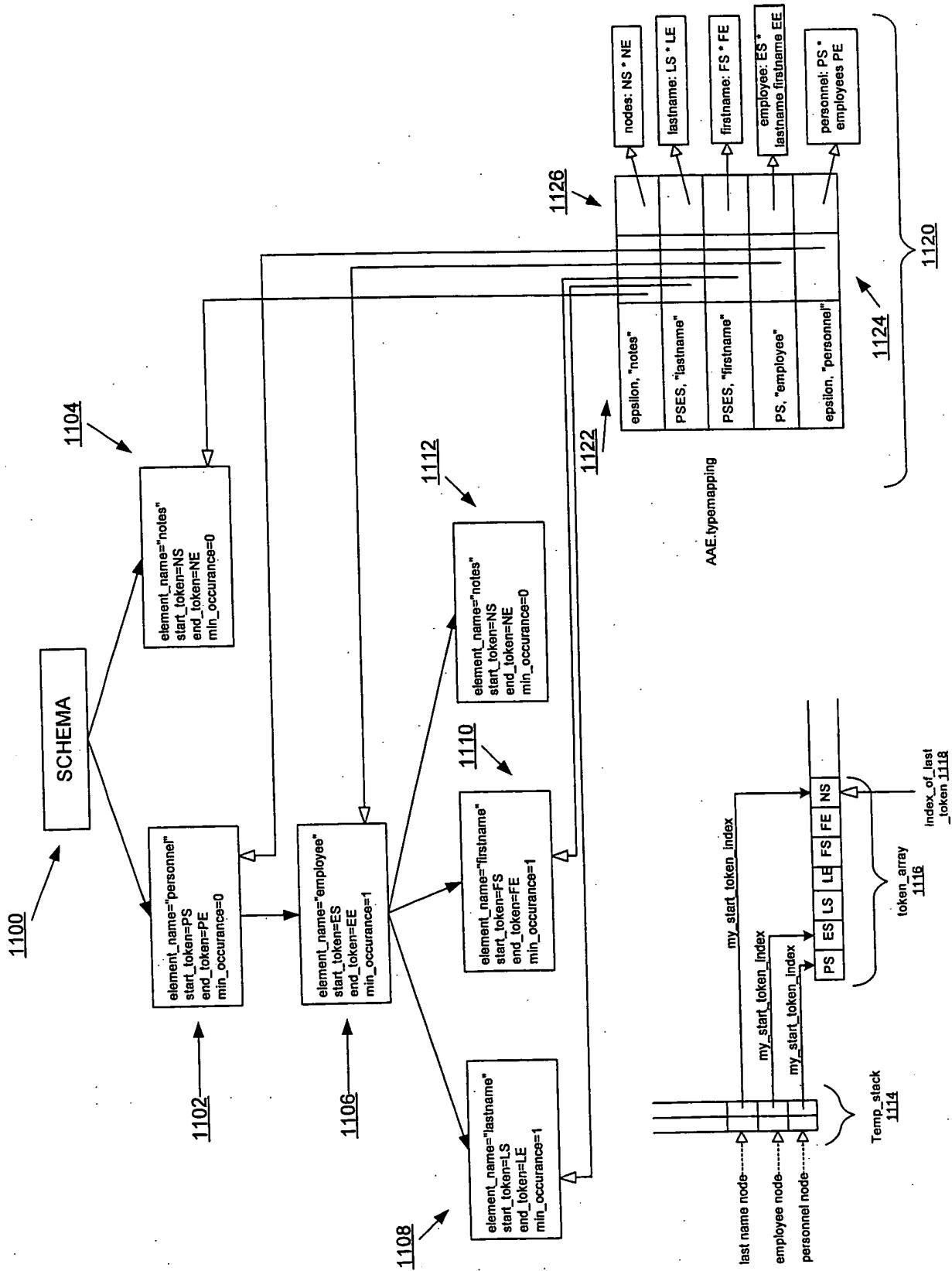


FIGURE 11